



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/568,384

02/14/2006

Ernest C. Chen

PD-203069

1029

20991 7590 09/14/2007  
THE DIRECTV GROUP, INC.  
PATENT DOCKET ADMINISTRATION  
CA / LA1 / A109  
P O BOX 956  
EL SEGUNDO, CA 90245-0956

EXAMINER

GHEBRETINSAE, TEMESGHEN

ART UNIT

PAPER NUMBER

2611

MAIL DATE

DELIVERY MODE

09/14/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/568,384

**Applicant(s)**

CHEN ET AL.

**Examiner**

Temesghen Ghebretinsae

**Art Unit**

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 is/are allowed.
- 6) ☒ Claim(s) 2-4 and 7-9 is/are rejected.
- 7) ☒ Claim(s) 5-6, 10-11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_.

**DETAILED ACTION**

1. It would be of great assistance to the Office if all incoming papers pertaining to a filed application carried the following items:

1. Application number (checked for accuracy, including series code and serial no.).
2. Group art unit number (copied from most recent Office communication).
3. Filing date.
4. Name of the examiner who prepared the most recent Office action.
5. Title of invention.
6. Confirmation number (See MPEP § 503).

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 7 is rejected under 35 U.S.C. 112, first paragraph in that the enabling disclosure is not commensurate in scope with the claims (In re Hyatt 218 USPQ 195).

The above claim is "single means" claim in that the claim recites a single element "scrambler" followed by particular functional attributes.

***Claim Rejections - 35 USC § 102***

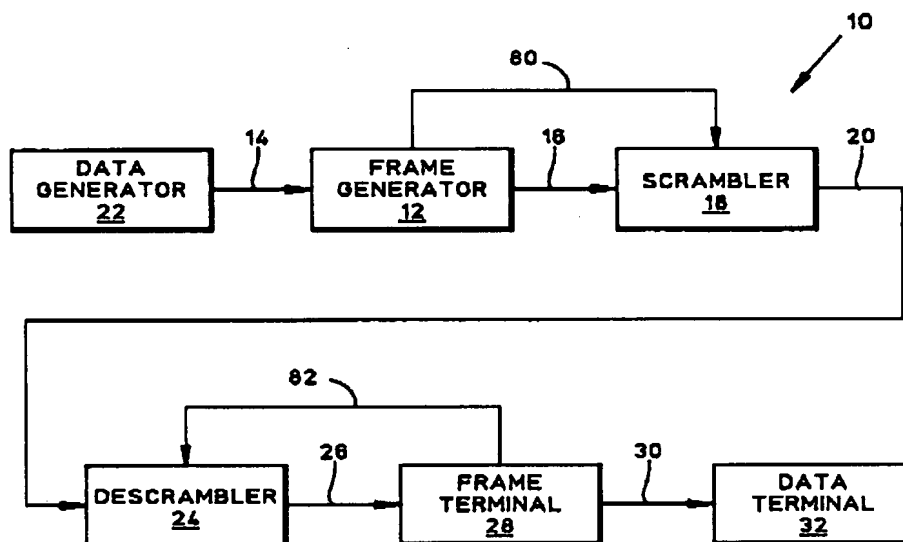
4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 2-4 and 7-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Martin (6,952,480).

6. Martin discloses an apparatus/method for scrambling symbols in a data transmission system comprising: means for scrambling all elements of frame prior to transmission of the frame by the system so that all the elements have a common reference phase. The frame comprises a frame header or frame body and the frame further comprises one more pilot symbols.



7. Claims 2-4 and 7-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Faulkner et al (5,144,669).

Faulkner discloses apparatus/method for scrambling symbols in a data transmission system comprising: means for scrambling all elements of frame prior to transmission of the frame by the system so that all the elements have a common

reference phase. The frame comprises a frame header or frame body and the frame further comprises one more pilot symbols( see claim 5 and 15)

8. Claims 2-4 and 7-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Laroia et al (us2004/0095904).

Laroia discloses apparatus/method for scrambling symbols in a data transmission system comprising: means for scrambling all elements of frame prior to transmission of the frame by the system so that all the elements have a common reference phase. The frame comprises a frame header or frame body and the frame further comprises one more pilot symbols( see claim 4 and 16)

***Allowable Subject Matter***

9. Claims 5-6 and 10-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claim 1 is allowed.

11. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fail to anticipate or render obvious the claimed method of generating a scrambled signal having real symbols  $I_{S,k}$  and imaginary signals  $Q_{S,k}$  from a signal having real symbols  $I_k$  and imaginary symbols  $Q_k$ , comprising the steps of: generating a real part of a  $k^{\text{th}}$  element of a complex scrambling sequence ( $d_{I,k}$ ); generating an imaginary part of the  $k^{\text{th}}$  element of the complex scrambling sequence ( $d_{Q,k}$ ); generating a scrambling phase multiplier  $n_k$  according to:  $n_k = 2d_{I,k} + d_{Q,k}$ ; and generating the scrambled

Art Unit: 2611

signal:  $I S, k + j \cdot \text{times} \cdot \text{times} \cdot Q S, k = (I k + j \cdot \text{times} \cdot \text{times} \cdot Q k) \cdot \text{times} \cdot e j \cdot \text{function} \cdot (2 \cdot \text{times} \cdot \text{times} \cdot \pi \cdot \text{times} \cdot \text{times} \cdot n k^4)$  as claimed in claim 1.

### **Conclusion**

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Temesghen Ghebretinsae whose telephone number is 571-272-3017. The examiner can normally be reached on Monday-Friday from 8 to 6. The examiner can also be reached on alternate .

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ghayour Mohammed, can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

T.Ghebretinsae

9/5/07.

Temesghen Ghebretinsae  
Primary Examiner  
Art Unit 2611

TEMESGHEN GHEBRETINSAE  
PRIMARY EXAMINER